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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/661,586	09/15/2003	Masashi Horiuchi	030673-167	8042
21839	7590	04/05/2005	EXAMINER	
BURNS DOANE SWECKER & MATHIS L L P			MILLER, TAKISHA S	
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			2855	

DATE MAILED: 04/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

H.A

Office Action Summary

Application No.

10/661,586

Applicant(s)

HORIUCHI, MASASHI

Examiner

Takisha Miller

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 January 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 8-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 13 and 15 is/are allowed.
- 6) ☒ Claim(s) 8-12, 14 and 16-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 8-17 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 8-12,14,16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Melrose (5,172,774) in view of Allard et al. (4,993,267)(hereinafter Allard).

- a. With respect to claims 8 and 16, Melrose teaches a torque detection device comprising: at least one strain gauge unit (19) mounted on a surface of a flexible external gear (16), a bridge circuit (Col. 3, lines 10-12)(Fig.3) constituted by the strain gauge unit (19), and a signal processing circuit for detecting the torque on the basis of output signals from the bridge circuit (Col. 3, lines 22-28), wherein the strain gauge unit (19) has a strain gauge pattern including at least one detection segment made from resistance wire (Figs. 2,3). Melrose fails to teach the detection segment being formed in a circular arc shape of a grid pattern formed by portions of the resistance wire and the grid pattern having straight portions arranged at equal intervals and along a direction inclined with respect to a tangential direction of the circular arc shape and a radial direction of the

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circular arc shape. Allard teaches a detection segment (49) being formed in a circular arc shape of a grid pattern formed by portions (123,125) of the resistance wire (Col. 8, line 63- Col.9, line 24) and the grid pattern having straight portions arranged at equal intervals and along a direction inclined with respect to a tangential direction of the circular arc shape and a radial direction of the circular arc shape (Fig.2)(Col. 10, lines 25-44). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Melrose to include the above limitations as taught by Allard in order to be conjointly flexible with the diaphragm, compact in size, rugged in construction, economical to manufacture, easily assembled, reliable, sensitive and accurate in operation (See Allard; Col. 2, lines 27-36).

b. With respect to claims 9-12, Melrose in view of Allard teaches a torque detection device comprising a strain gauge unit (19) having a strain gauge pattern formed in a circular arc shape (see Allard; Fig.2). However, Allard states that even though strain gauge (25) is illustrated as having a predetermined configuration, it is contemplated that other strain gauge configurations may be utilized within the scope of the invention (see Allard; Col. 9, lines 37-47). The shapes of the strain gauge pattern, absent any criticality, are only considered to be obvious modifications of the shape of the strain gauge pattern disclosed by Melrose in view of Allard as the courts have held that a change in shape or configuration, without any criticality, is within the level of skill in the art as the particular shape claimed by Applicant is nothing more than one of numerous shapes that a person having ordinary skill in the art will find obvious to provide using routine experimentation based on its suitability for the intended use of the invention. See *In re Dailey*, 149 USPQ

47 (CCPA 1976). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Melrose in view of Allard in order to utilize various strain gauge patterns, which are readily available in the art (MPEP 2144).

c. With respect to claims 14 and 17, Melrose teaches a torque detection device wherein the strain gauge pattern of the strain gauge unit (19) includes a wiring pattern for connecting a plurality of the detection segments to each other so that the bridge circuit is constituted, and wherein the detection segments and the wiring pattern are integrally formed (Fig.3)(Col. 3, lines 10-12).

Allowable Subject Matter

4. Claims 13 and 15 are allowed.

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Takisha Miller whose telephone number is (571) 272-2184. The examiner can normally be reached on Monday - Friday (7:00 am - 3:30 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz can be reached on (571) 272-2180. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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EDWARD LEFKOWITZ
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800